

REMARKS

Applicant's attorney wishes to thank the Examiner for the careful consideration given this case, for which Claims 1, 3-5 and 8-17 are pending. This response addresses those issues raised in the Office Action mailed June 10, 2002. In view of the following remarks, Applicant believes the present application is in condition for final allowance, and an indication to that effect is respectfully requested.

35 U.S.C. 112 First Paragraph:

Claims 1-5 and 8-17 were rejected under 35 U.S.C. §112 as containing "subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention." Specifically, the Examiner stated that "[t]he specification as originally filed does not teach that the interpenetration of the fibers forms pores."

Applicants submit that the specification not only teaches that the interpenetration of the fibers forms pores, but does so quite clearly. Reference to the interpenetration of the fibers is made at numerous points throughout the specification, including:

"In a first stage, an aqueous suspension of the natural fibres is applied onto a papermaking machine wire and, in a second stage, the heat-sealable, biodegradable polymer fibres are laid onto the natural fibre layer in such a manner that they partially penetrate the natural fibre layer, wherein interpenetration of the two layers may be adjusted by the degree of dewatering on the wire." (Page 3, lines 6-10); and

"Figure 1b) shows how, by means of the stated dewatering of the two layers, in particular the second layer containing the fibres 2, partial interpenetration of the two layers is achieved, the synthetic fibres 2 passing between the natural fibres 1." (Page 9, lines 21-21).

Applicant submits that from these two references alone, one skilled in the art would fully understand that the word "interpenetration" is an indication that there exist spaces between the fibers, i.e., pores. The following additional language from the specification makes it even clearer that such is the case:

"During the production process, the synthetic biodegradable heat-sealing fibres of the second ply partially penetrate the first ply and, during the drying process on the papermaking machine, in a molten state enclose the natural fibres. The pores necessary for filtration are kept clear during this operation." (Page 9, lines 1-4).

Under the Examiner's interpretation of the specification, it is difficult to imagine which "pores" are being referred to in the foregoing paragraph if they refer to something other than those formed by the partial interpenetration of the synthetic and natural fibers. There are simply no other pores at issue here, nor would there be any reason for one skilled in the art to believe that the referenced pores were formed by something other than such interpenetration. Reference is further made to the drawings, and in particular Figure 1(b), which shows various open spaces (i.e., "pores") present between the interpenetrating fibres. Therefore, to the extent the Examiner is still of the belief that the specification lacks explicit support regarding the pores being formed by the interpenetration of the fibers, Applicants respectfully submit that this concept is well-defined and commonly understood in the art. Reconsideration is respectfully requested.

35 U.S.C. § 103(a)

The Examiner rejects Claims 1, 3-5, 10 and 16-17 under 35 U.S.C. § 103(a) as being unpatentable over JP 07-125128 A to So et al in view of WO 96/19599 to Lorcks et al (equivalent to U.S. Patent No. 6,218,321). The Examiner restates the earlier basis for rejection as to the preamble, i.e., that it is not entitled to patentable weight. Without in any way waiving its previous arguments on this point, Applicants note that in its Amendment and Response dated January 7, 2002, Claim 1 was amended to positively recite the fact that in the structure of Applicants' invention "said ply containing natural fibers and said ply containing biodegradable,

thermoplastic fibers are connected by interpenetration of said thermoplastic fibers and said natural fibers to form pores." Therefore, while the Examiner may continue to ignore the preambles in each of Applicants' claims, the Examiner cannot refuse to accord patentable weight to the foregoing language.

Further, as the Examiner asserts, the So et al. reference does not teach that the structure should have pores, and thus, So et al. does not anticipate independent claim 1 under 35 U.S.C. §102(b). Further, all claims that depend properly from that independent claim (i.e., Claims 3-5 and 8-17) also contain that limitation and are therefore not anticipated by So et al. Applicants presume that the previous 102(b) rejection on the basis of So et al. has either been overcome by Applicants' Amendment and Response dated January 7, 2002, or has been withdrawn as a basis for rejection by the Examiner.

In order to supply the missing pores element, the Examiner relies upon Lorcks et al. in rejecting claims 1, 3-5, 10 and 16-17. The Examiner alleges that it would have been obvious to one skilled in the art to form the material of So et al. so that it comprised pores, given the supposed teaching in Lorcks et al. "that the type of fabric disclosed in So et al. is also suitable for use for making porous or permeable materials."

As elaborated in Section 2143 of the MPEP, to establish a prima facie case of obviousness, three basic criteria must be met by the Examiner. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the teachings.

According to these standards, the Examiner has not established a prima facie case of obviousness. The Examiner has not sufficiently demonstrated that there was a suggestion or motivation to combine the teachings of So et al. with Lorcks et al. (or, for that matter, of So et al. and Lorcks et al. with Pophusen et al. in rejecting claims 8-9 and 11-15). Applicants respectfully submit that the appearance of the word "filter" on the three occasions throughout the entire

Lorcks reference – buried amongst a laundry list of numerous items for which the Lorcks et al. invention can allegedly be used - hardly rises to the level of constituting a teaching. To say that this scant disclosure constitutes the suggestion or motivation to combine the So et al. and Lorcks references, as the Examiner has done, is even more tenuous. Further, the Examiner's rejection under §112 above would seem to indicate that the disclosure of something as being useful as a filter material does not equate with the disclosure of a material that includes pores.

A further reason why the Examiner's combination of references is inapposite is the fact that Lorcks et al. discloses the use of its product in connection with filter *fabrics* (see Lorcks et al., col. 8, line 20). As the USPTO's own classification system makes clear, Applicants' filter material is quite different from the Lorcks et al. fabric. The class definition for Class 442 "Fabrics" (in which the Lorcks et al. reference is classified) states:

"This is the class for woven, knitted, nonwoven, or felt article claimed as a fabric, having structural integrity resulting from forced interassociation of fibers, filaments, or strands, the forced interassociation resulting from processes such as weaving, knitting, needling hydroentangling, chemical coating or impregnation, autogenous bonding (i.e., heat- and/or pressure-promoted welding or solvent bonding) or felting, but not articles such as paper, fiber-reinforced plastic matrix materials (FRP), or other fiber-reinforced materials wherein fibers are present only as a filler material."

The USPTO definition goes on to state that Class 442 "is **not** the location for nonwoven sheets produced by wet-laying fiber slurries on a screen (i.e., papers)," further stating that "[p]apers, per se, are classified in Class 162, subclasses 100+." As disclosed in Applicants' specification at page 3, lines 6-10, its filter material is formed by applying an aqueous suspension of natural fibers onto a papermaking machine wire in a first stage, following which the heat-sealable, biodegradable polymer fibers are laid onto the natural fiber layer in a second stage – thus clearly constituting a "paper" as defined by the USPTO. Applicants therefore submit that one seeking to construct Applicants' filter material would not look to a reference which relates to "fabrics," such as Lorcks et al.

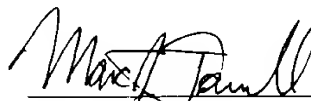
The Examiner lastly rejects Claims 8-9 and 11-15 under 35 U.S.C. § 103(a) as being unpatentable over So et al. and Lorcks et al. in view of Pophusen et al., U.S. Patent No. 5,928,739. With regard to Pophusen et al, Applicants respectfully submit that the Examiner has likewise failed to state a prima facie case of obviousness. There is no teaching, suggestion, or motivation provided in Pophusen et al which supports the proposed combination with So et al. or with Lorcks et al. The mere fact that features from these three inventions may possibly be combined in some fashion does not render the resulting combination obvious unless the prior art suggests or provides motivation for the combination. See MPEP § 2143.01. The Examiner has therefore not provided proper support for the conclusion that the proposed combination is an obvious one. Further, given that Pophusen et al describes a dense material which is watertight and nearly airtight, one skilled in the art would not look to Pophusen et al. in connection with the construction of a material which includes pores so as to be suitable for use as a filter.

Again, without going into the specifics of the dependent claims, Pophusen et al. does not teach a fundamental concept of the present invention, namely, a filter material which includes a ply containing natural fibers and said ply containing biodegradable, thermoplastic fibers which are connected by interpenetration of the fibers to form pores. This limitation is positively recited in the lone independent claim of the present invention, and this limitation is not taught or suggested by Pophusen et al. or any of the other references cited by the Examiner. As put forth by the Examiner, the cited patents do not contain a suggestion to combine the teachings found therein. Accordingly, rejection under 103(a) is inappropriate. Therefore, reconsideration of the rejection of claims 8-9 and 11-15 under 35 U.S.C. §103(a) is respectfully requested.

In view of the foregoing remarks, it is respectfully submitted that the present application is in condition for allowance and notice to such effect is requested. If the Examiner believes that additional issues need to be resolved before this application can be passed to issue, the undersigned invites the Examiner to contact him at the telephone number provided below.

Respectfully submitted,

Dated: December 10, 2002



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